Applications of Integration

Section 6.1 More about Areas

**Key point.** *Area between Curves* (page 442).

- Consider Example 1 (page 442).

- Watch and Learn from the Video Lessons:
  
  Example 2. Area Between Two Curves.

  Example 5. Area Between Curves in Terms of *y*.

  Example 6. Area Under a Cycloid.

**Tutorial and self-assessment questions**

- Do Exercise 5, page 446.

Section 6.2 Volumes

**Key point.** *Definition of Volume* (page 449).

- Consider Example 1 (pages 449 - 450).

- Watch and Learn from the Video Lessons:

  Example 2. Disks in Terms of *x*. 
Example 3. Disks in Terms of $y$.

- Consider Example 4 (page 452).
- Consider Example 5 (page 452).
- Consider Example 6 (page 454).
- Watch and Learn from the Video Lessons:
  Example 8. Volume of a Pyramid.

**Tutorial and self-assessment questions**

- Do Exercise 4, page 457.

### Section 6.3 Arc Length

**Key point.** *Arc Length Formula* (page 463).

- Consider Example 1 (page 463).
- Watch and Learn from the Video Lessons:
  Example 3. Arc Length of a Parabola.

**Tutorial and self-assessment questions**

- Do Exercise 5, page 465.